

CLAIMS

1. A reforming catalyst comprising precious metal particles dispersed on a support material, wherein the support material comprises ceria, and characterised in that the support material further comprises magnesium aluminate.
2. A reforming catalyst according to claim 1, wherein the support material further comprises magnesium oxide.
3. A reforming catalyst according to claim 2, wherein the molar ratio of magnesium aluminate to magnesium oxide is between 15:1 and 1:15.
4. A reforming catalyst according to any preceding claim, wherein the support material contains at least 20wt% magnesium aluminate or at least 20wt% magnesium aluminate and magnesium oxide, based on the weight of the support material.
5. A reforming catalyst according to any preceding claim, wherein the support material is made by a process wherein aluminium magnesium hydroxycarbonate is calcined to form a mixture of magnesium oxide and magnesium aluminate.
6. A reforming catalyst according to any preceding claim, wherein the support material further comprises zirconia.
7. A reforming catalyst according to any preceding claim, wherein the support material further comprises iron oxide or chromium oxide.
8. A reforming catalyst according to any one of claims 1 to 6, wherein the support material further comprises chromium oxide.
9. A reforming catalyst according to any preceding claim, wherein the support material comprises ceria and optionally zirconia, iron oxide or chromium oxide dispersed on the surface of magnesium aluminate or a mixed magnesium aluminate/magnesium oxide material.

10. A reforming catalyst according to any preceding claim, wherein the support material comprises ceria and chromium oxide dispersed on the surface of magnesium aluminate or a mixed magnesium aluminate/magnesium oxide material.

5 11. A reforming catalyst according to any preceding claim, wherein the support material consists essentially of ceria and chromium oxide dispersed on the surface of magnesium aluminate or a mixed magnesium aluminate/magnesium oxide material.

10 12. A reforming catalyst according to any preceding claim, wherein the precious metal particles suitably comprise rhodium, ruthenium or platinum.

13. A catalysed component comprising a reforming catalyst according to any one of claims 1 to 12 deposited on a substrate.

15 14. A process for reforming fuel using a catalysed component according claim 13, comprising a step of supplying fuel, steam and optionally air to the catalysed component.

20 15. A process for reforming fuel using a catalyst according to any one of claims 1 to 12, comprising a step of supplying fuel, steam and optionally air to the catalyst.

16. A fuel processing system comprising a catalysed component according claim 13.

25 17. A fuel processing system comprising a catalyst according to any one of claims 1 to 12.

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